



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

A

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,242	03/30/2004	Roger G. Sellers	71024-576	4836
59582 7590 08/28/2007 DICKINSON WRIGHT PLLC 38525 WOODWARD AVENUE SUITE 2000 BLOOMFIELD HILLS, MI 48304-2970			EXAMINER AMIRI, NAHID	
			ART UNIT 3679	PAPER NUMBER
			MAIL DATE 08/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/813,242

Applicant(s)

SELLERS ET AL.

Examiner

Nahid Amiri

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/02/2007 has been entered. Claims 1-11 are pending.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: reference sign "VA", page, 7, line 1.

The drawings are objected to because Fig. 1A, reference "78" should be changed to --178--. Figs. 1 and 2, use inappropriate cross hatch pattern for rubber boot dust cover "170".

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1, lines 12-14, the limitation of "said split segment disrupting a full circular continuity of said annular metal ...and providing circumferential flexibility in said annular metal upper bearing" was not disclosed in application as originally filed.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 11 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 11, line 1, "a chamfered inner surface" is provided to facilitate, not restrict, articulation of the moveable member 132. See paragraph 0025.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 2,635,906 Graham et al., in view of US Patent No. 3,128,110 Herbenar.

With respect to claims 1 and 4, Graham et al. disclose a joint assembly (10, Figs. 1-2) (column 2, lines 34-40) including a metal housing (11) having a side wall which defines a central bore having a closed end and an open end; a metal lower bearing being unitary with the housing (11); a movable member (12) having a head end portion (12a) disposed in the central bore and a shank portion (12b-12d) extending from the head end portion (12a), the head end portion (12a) engaging the central bore of the metal housing (11), the shank portion (12b-12d) being at least partially disposed outside of the central bore; an annular metal upper bearing (13) disposed about the movable member (12) within the central bore, the annular metal upper bearing (13) having an inner surface engaging the head end portion (12a); an annular cover plate (15) disposed about the movable member (12) and secured within the central bore; a spring member (14) compressed between the annular cover plate (15) and an upper surface of the annular upper bearing (13); and wherein the spring member exerts an axial preload force on the annular metal upper bearing (13) toward the closed end of the central bore, and the head end portion (12a) simultaneously. Graham et al., do not disclose that the outer surface of the annular metal upper bearing engages the side wall, and the upper bearing having a split segment linking the inner surface with the outer surface, and the split segment disrupting a full circular continuity of the annular metal upper bearing and establishing a generally C-shaped body thereof and providing circumferential flexibility in the annular metal upper bearing. Herbenar teaches a ball joint (Figs. 1, 2, column 3, lines 54-60) having a lower bearing (42) and an annular upper bearing (40), the annular upper bearing (40) having a split segment (56) linking the inner surface (62) an outer surface (58), wherein the split segment (56) disrupting a full circular continuity of the annular upper bearing (40) and establishing a generally C-shaped body thereof and providing circumferential flexibility in the annular upper bearing (40); wherein the annular metal upper bearing (40) is configured to engage the side wall of the housing (12); and the lower bearing (42) retained with the central

bore by an interference fit. It would have also been obvious to one of ordinary skill in the art at the time of invention was made to provide the upper bearing of Graham et al., with a C-shaped split segment, the upper bearing to engage the side wall of the housing as taught by Herbenar in order to provide a bearing with the expansible characteristic and creating an assembly which is operational with varying clearance or interference fits between the bearing and the bore of the housing due to tolerance stack ups.

With respect to claims 3 and 5, Graham et al. disclose (Fig. 2) that the annular cover plate (15) and spring member (14) are composed of metal, and the annular metal upper bearing (13) is axially displaceable within the central bore.

With respect to claim 6, Graham et al. disclose the claimed invention except for the lower bearing is retained with the central bore by an interference fit. Herbenar teaches a joint (Fig. 1) having a lower bearing is retained with the central bore (18) by an interference fit. It would have been obvious to one of ordinary skill in the art at the time of invention was made to provide the joint of Graham et al. with a lower bearing as taught by Herbenar in order to urge the lower bearing into uniform bearing relationship with the movable member.

With respect to claim 7, Graham et al. discloses (Fig. 1) that the dust boot restrictor (17) disposed about the shank portion (12b-12d).

With respect to claim 8, Graham et al. disclose the claimed invention except for having a flexible dust cover coupled between the housing and the shank portion of the movable member. Herbenar teaches (Fig. 1) a flexible dust cover (74) coupled between the housing (12) and the shank portion (32) of the movable member (28). It would have been obvious to one of ordinary skill in the art at the time of invention was made to provide the joint of Graham et al., with a dust cover as taught by Herbenar in order to seal the open upper end of the housing.

With respect to claim 10, Graham et al. disclose (Fig. 1) the housing (11) includes a deformable annular region (11j) adjacent the open end of the central bore, the deformable annular region adapted for radially inward deformation to secure the annular cover plate (15) within the central bore.

Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Graham et al. and Herbenar as applied to claims 1, 3-8, 10 and 11 above, and further in view of US Patent No. 5,772,337 Maughan et al.

With respect to claim 2, Graham et al. disclose (Fig. 3) having a lubrication port at side of the housing. Graham et al. do not disclose having an axial lubrication port disposed in the closed end of the central bore. Maughan et al. teach (Fig. 1) a annular metal bearing (26) includes at least one lubrication slot (82) disposed in the closed end (E) of the central bore. It would have been obvious to one of ordinary skill in the art at the time of invention was made to move the lubrication port of the Graham et al. to the closed end of the central bore as taught by Maughan et al. in order to a provide a lubrication port with easy access from lower part of the housing.

With respect to claim 9, Graham et al. disclose the claimed invention except for the lower metal bearing including at least one lubrication slot disposed on an inner bearing surface; and wherein said annular metal upper bearing includes at least one lubrication slot disposed on an inner bearing surface. Maughan et al. teach (Fig. 1) an annular metal bearing (26) includes at least one lubrication slot (82) disposed on an inner bearing surface. It would have been obvious to one of ordinary skill in the art at the time of invention was made to provide the inner surface of the annular metal bearing of Graham et al. with at least one lubrication slot as taught by Maughan et al. in order to provide a passage for purpose of lubrication.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Graham et al. and Herbenar as applied to claims 1, 3-8, and 10 above, and further in view of US Patent No. 5,116,159 Kern, Jr. et al.

With respect to claim 11, Graham et al. disclose the claimed invention except the annular cover plate including a chamfered inner surface to restrict articulation of the movable member. Kern Jr. et al. teach a (Fig. 4, column 3, lines 55-57) that the edge of the annular edge (50) of the bearing (14) has a chamfered edge (54) to facilitating extrusion of the plastic upon the forming of the joint during preload. It would have been obvious to one of ordinary skill in the art at the time of invention was made to provide the inner surface of the annular cover plate of Graham et al. with a chamfered as taught by Kern, Jr. et al. in order facilitating extrusion of the

Art Unit: 3679

plastic upon the forming of the joint during preload and offers a grater extrusion capacity for any given set of dimensional tolerances.


Response to Arguments


Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nahid Amiri whose telephone number is (571) 272-8113. The examiner can normally be reached on 8:30-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Nahid Amiri
Examiner
Art Unit 3679
August 9, 2005


GREGORY J. BINDAS
PRIMARY EXAMINER